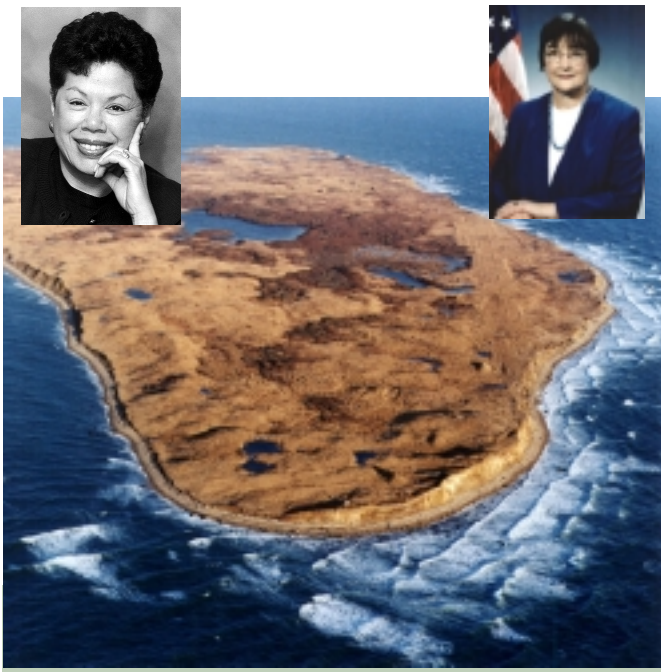
ENVIRONMENTAL News

Northern Division, Naval Facilities Engineering Command Winter 2001

Navy Consults With Wampanoag Tribe On Environmental Issues at Nomans Land Island



Aerial view of Nomans Land Island. Photo insets: (right) Elsie L. Munsell, former Deputy Assistant Secretary of the Navy (Environment and Safety) and (left) Beverly Wright, Chairperson of the Wampanoag Tribe of Gay Head in Aquinnah, MA.

By Rod Warner

Director, Environmental Engineering Division

October 4th was an unseasonably warm day on Martha's Vineyard in Massachusetts , befitting a visit by Ms. Elsie Munsell to the Wampanoag Tribe of Aquinnah. Chief Donald Malonson and Chairperson Beverly Wright, along with other council members and staff, extended an equally warm welcome to the Deputy Assistant Sercretary of the Navy at their offices and cultural center. However, this beautiful setting and hospitality did not deter Tribe members from expressing their concerns with environmental impacts on their community from the Navy's past use of Nomans Land Island as a practice bombing range. While issues still need to be resolved, the meeting appeared to mark a turning point for improved relations between the Navy and the Wampanoag Tribe. Followup meetings later in October and in December, as well as a public meeting in January and planned future meetings continue to address issues.

Navy-owned Nomans Land Island was used for air-to-surface bombing practice from the mid-1940s until May 1996, when operations ceased under the Base Realignment and Closure (BRAC) laws. Only dummy ordnance was used since the early 1950's. Unexploded ordnance (UXO) was removed by 1998 in accordance with the remediation plan approved by the Department of

(Continued on page 10)

Radon Program and Database Updates Planned for Family Housing

By Dominic DiGiantomasso

Radon Coordinator

Through an interagency agreement with the Department of Energy (DOE), the Navy has contracted with Lockheed-Martin, Oak Ridge National Laboratories (ORNL), TN, to update the existing Navy radon assessment and mitigation program (NAVRAMP) and database for navy family housing, Navywide. Along with revising the database, the project scope includes developing both screening and assessment management guidelines for housing managers and a family housing management plan. It will include testing, mitigation

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From the Department Head's Desk

By Conrad Mayer, P.E.
Head, Environmental Department

I have noticed a major shift of focus at the meetings I have attended this past year. Whereas we used to spend our time discussing the restoration and compliance programs, we now spend the majority of our time on operational issues. This does not reflect a lack of interest in our traditional environmental programs, but rather, a movement to address new challenges.

Ensuring the continued use of military training areas has emerged as a critical issue. The need to balance environmental stewardship and fleet readiness, under increased public scrutiny, has emerged as one of the most crucial and complex challenges the Navy faces today.

This shift in focus has also resulted in organizational changes aimed at providing a more comprehensive environmental program within NavFac. Environmental Planning, which is a key element in addressing encroachment issues, has moved from Base Development to the Environmental Directorship. Similarly, here at NorthDiv, the environmental planning folks have recently become part of the Environmental Department.

This change should not be readily apparent to our clients. It will, however, allow us to better leverage our environmental community in all areas, including environmental planning (NEPA, cultural resources, natural resources).

We've yet to move Bob Ostermueller, Tina Deininger, Jeanette Palma or Dave Krause to Code 18 spaces, but we're linking up in other ways. We always felt they were part of us anyway!

ENVIRONMENTAL News
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NORTHDIV Environmental News
is a quarterly publication of the

Environmental Department
Northern Division
Naval Facilities Engineering Command
10 Industrial Hwy, Mail Stop 82
Lester PA 19113-2090
www location: http://www.efdnorth.navfac.navy.mil

DSN 443-0567; COMM (610) 595-0567 FAX -0555

The Environmental Newsletter has been placed on the DENIX system under Navy/News.

The Northern Division Environmental Department does not endorse companies or products mentioned. Our primary target audience consists of Navy people at activities in our area of responsibility (the northeastern states) who are involved in environmental programs. The views and opinions expressed in this publication are not necessarily those of the Department of the Navy. We invite your contributions, comments and questions. To hold down costs, *Environmental News* is printed in black and white. Visit our website if you prefer to view or print a full-color version.

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PLAY BALL!

If You Remediate It, They Will Come

By Brian Helland
UST Program Manager

Could Foster Wheeler Environmental's Shana Hooth be having a "field of dreams"? Cleanup of NAS Brunswick's Old Navy Fuel Farm will allow for construction of new ball fields this summer.

On schedule and under budget, the Old Navy Fuel Farm at Naval Air Station Brunswick, Maine, was remediated by the NorthDiv Remedial Action Contract (RAC) contractor, Foster Wheeler Environmental, in less than four months. The cleanup will allow construction of new ball fields on the site.

Prior to decommissioning in 1993, the Old Navy Fuel Farm consisted of two separate tank farms. Nine mounded underground storage tanks stored jet fuel, aviation gasoline and ethylene glycol. The tanks ranged in size from 25,000 to 567,000 gallons. After the tanks and piping were removed, an air- sparging/soil vapor extraction (AS/SVE) system was installed.

The AS/SVE system experienced problems due to high groundwater and never operated as intended. After several years, it became apparent that remedial goals could not be achieved in a reasonable time frame. A feasibility study conducted in 1999 looked at options for bringing the site to closure, and determined that excavation and offsite asphalt batching would be the most cost-effective alternative.

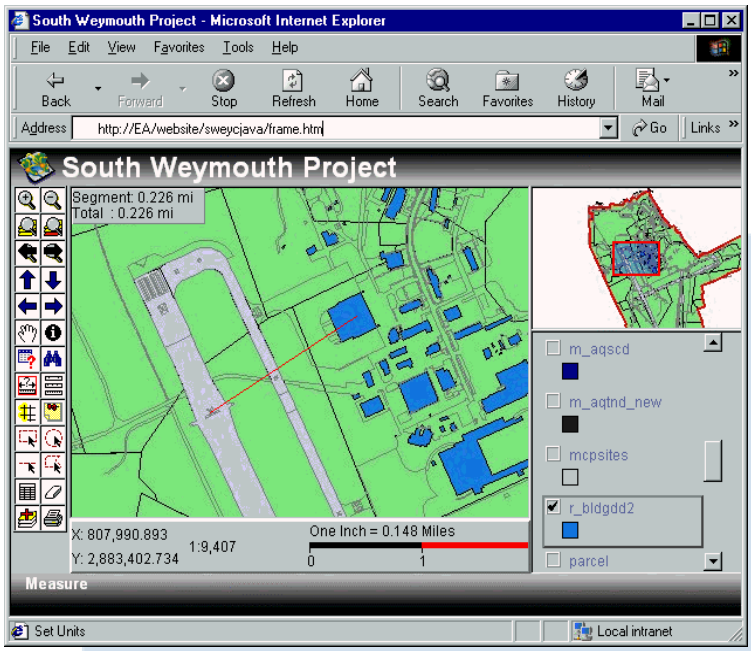
The project was awarded in June 2000, and an aggressive schedule was developed aiming for completion before winter. A risk-based cleanup standard of 870 ppm total petroleum hydrocarbons (TPH) was agreed to by the Maine Department of Environmental Protection. Test pits dug by Foster Wheeler delineated the problem, and excavation began in early September. Dewatering was required to remove contaminated soil from below the water table. By the end of the project, 14,678 tons of soil were recycled, and nearly 300,000 gallons of groundwater were treated and discharged. Final inspection was completed on 31 October.

The prompt, cost-effective completion of the project was appreciated by our client. As Tony Williams, NAS Brunswick's restoration program manager put it, "Please extend our sincere thanks to all participating Foster Wheeler employees for the extra efforts and customer focus they extended to us throughout this difficult project." Construction of ball fields this summer will put the Old Navy Fuel Farm site back into productive use.

NAS South Weymouth Gets New GIS Web Tool For FOST/FOSL Creation

By James D. Ropp
EA Engineering

Northern Division's Environmental Management consultant, EA Engineering, Science and Technology, Inc. (EA), has created a geographic information system (GIS) management tool to facilitate the development of findings of suitability to transfer and lease (FOSTs and FOSLs) for the Naval Air Station South Weymouth, Massachusetts. This tool is 100% Internet-based, which allows secured access by parties involved in this project—Northern Division, the NAS South Weymouth Caretaker Site Office, and their contracted team members.



EA's GIS tool uses a standard internet browser to provide real-time, up-to-date information on the environmental status of sites, parcels, and buildings, as well as schedules for the transfer of base property.

EA is an ESRI (maker of ArcView and ArcInfo) corporate business partner, and is making use of ESRI's latest technological offering called ARCIMS. With this technology, EA can bring collaboration among the Navy's team members by providing up-to-date information on the environmental status of sites, parcels and buildings, as well as schedules for the transfer of base property.

Maps of the base will depict properties, buildings, roads, surface water bodies, aquifer zones, environmental investigation sites, and the parcels that are under consideration for lease or transfer. Reports can be generated showing informational drawings and bibliographical entries for a particular site or area of concern. Users can interactively work with the maps and create printable custom views and labeling. The preparation of findings of suitability to transfer (FOSTs) and findings of suitability to lease (FOSLs) will be simplified by the easy access to structures or environmentally sensitive areas in a parcel, the status of environmental restorations, and readily printable figures and database queries that can be incorporated into the documents. and readily printable figures and database queries that can be incorporated into the documents.

Historically, GIS systems were "burned" to CD-ROM and distributed. Often, the CD-ROMs became quickly outdated and obsolete. With EA's solution, the current maps and status information are effectively available on a real-time basis. Changes to the maps are done in one place and are immediately viewable to all team members via a standard web browser such as Microsoft Internet Explorer or Netscape Communicator.

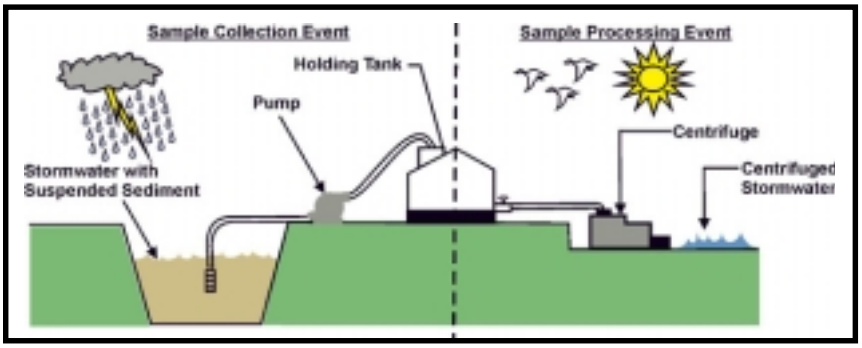
After it is developed, implemented and refined, the GIS system or portions thereof can be made available to the public—allowing them to see the progress and schedules of the environmental restorations and property transfers. It was clear during early meetings with NorthDiv and the South Weymouth Caretaker Site Office that this Internet-based tool would have a positive public relations value for the Navy. By making information available over a common communication platform such as the World Wide Web, community and government agencies will eventually be able to gain access to the system via their local phone connection.

EA is excited to bring the latest Internet technologies to current NorthDiv projects and is looking forward to helping the Navy achieve its goals through the power of information collaboration over the Internet.

Riders on The Storm

How Suspended Sediment Affects Navy and Adjacent Properties

By Kevin Sharpe
EA Engineering



Almost 100 tons of sediment are moved by stormwater on an annual basis from a hypothetical 200-acre facility. These sediments, typically with unknown chemical concentrations, are deposited in retention ponds, swales, or surface water bodies.

The concept of stormwater sampling is certainly not new to facilities where monitoring under the National Pollutant Discharge Elimination System (NPDES) is conducted. The concept of Total Suspended Solids (TSS) analysis is typically a component of the NPDES monitoring. What has probably not been considered is the chemical quality of that sediment. With the process of stormwater discharge moving millions of tons of sediment each year, and the concept of sediment quality receiving more regulatory attention, suspended sediment sampling is becoming more common.

Northern Division is currently assessing chemical concentrations of suspended sediment at the Naval Support Activity in Mechanicsburg, Pennsylvania. The activity has a 1.1-mile drainage swale that accepts and conducts water during storm events. The drainage swale receives water from an 824-acre facility where stormwater is channeled to five outfalls. With PCB being the main contaminant of concern and having a high affinity to sorb to sediment, the sampling of suspended sediment was chosen to assess the chemical quality of continuing sediment contributions to the drainage swale. This monitoring was used to provide information for remedial alternatives. To avoid recontamination, preliminary remedial goals for ecological concerns could not be lower than the suspended sediment concentrations currently entering and being deposited in the swale. Suspended sediment sampling requires the assessment of TSS concentrations of stormwater. Once known, the number of gallons of stormwater that will yield a satisfactory quantity of suspended sediment for chemical analyses can be calculated. These volumes of stormwater are then collected into tanks during storm events of appropriate duration and intensity. After the storm, suspended sediment is separated from the stormwater by centrifuging. This results in the collection of a sediment sample that can be analyzed by standard analytical methods.

Mean values for TSS in stormwater samples have been reported at concentrations of non-detect to 1,223 mg/L. This is from a range of concentrations from non-detect to 36,200 mg/L. For the example in the first paragraph, it was assumed that a 200-acre activity has some paving, with a mean TSS value of 100 mg/L and normal annual precipitation of 42-in./yr.

The suspended sediment sampling method is very useful where contaminants have a greater affin

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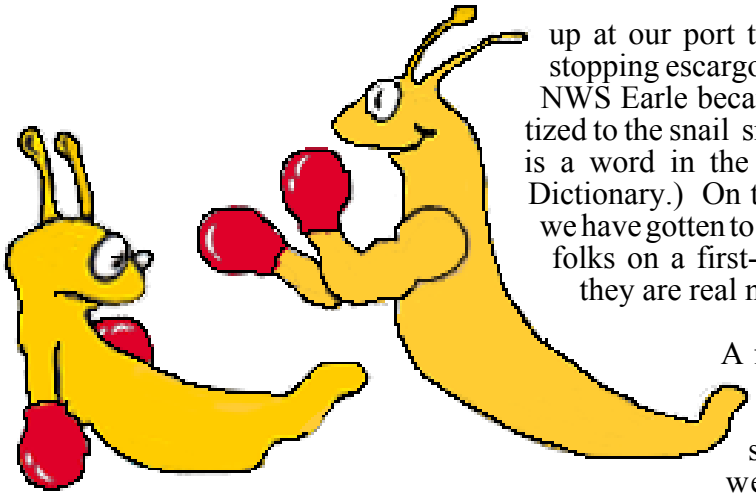
Even stormwater swales over maintained ground can have suspended sediment concentrations of nearly 100 mg/L.

Slugging It Out at Earle

By Jeff Davis
Regional Entomologist



The Naval Weapons Station Earle (NJ) homeports vessels that transport ordnance to support the fleet. On a number of occasions, ordnance arriving from overseas was infested with snails. "So what's the big deal?" It is a very big deal when the mollusks are non-native, agricultural pests and (by law) quarantinable pests. The USDA Animal and Plant Health Inspection Service (APHIS) lays down the law, clamps on the lid, could close the whole port, and does not permit cargo to be offloaded and processed. The result: a ship that cannot meet mission requirements because it is "padlocked" to the pier.

Years ago, cargoes with quarantinable mollusks were fumigated within the ship's hold with carboxide gas. An extensive operation, to be sure, but effective and satisfactory to the APHIS folks. However, during the late 80s/early 90s, carboxide was recognized as an ozone depleter and is no longer manufactured. However, the snails continued to try to sneak in.

Other fumigants were considered… and rejected because of possible incompatibility with the ordnance. The result: We had a problem and no discernable solution.

In 1993, our first adventure without solution began. To meet APHIS requirements, we offloaded the infested ordnance (over a bed of salt) onto freezer rail cars and ran the refrigeration units until we froze the slimy hors d'oeuvres. In 1994 we thought we had another shipment of snail- infested ordnance, but luckily, no snails were snagged. Repeatedly, we had problems or scares when APHIS showed up at our port talking of cargo-stopping escargot. Our people at NWS Earle became totally sensitized to the snail snafu (Yes! Snafu is a word in the Random House Dictionary.) On the positive side, we have gotten to know the APHIS folks on a first-name basis, and they are real nice people.

A few months ago, several slugs (superficially shelless snails) were spotted silently slinking on sidewalks, streets, soil and sidings at the station. Realizing that this could be a problem, the slow-moving specimens were secured and shipped overnight to APHIS [who just happens to have a malacologist (snail sleuth) on staff]. The slugs were identified as native and unregulated -- a satisfactory solution, to say the least. The single-shoed sliders were made in the USA. However, the motto of "better safe than slimy" does apply.

Originally thought to be an invasive species, these small black creatures found slithering all over the place at Earle turned out to be ordinary garden-variety domestic slugs.

Radon Program and Database Updates Planned for Family Housing

(Continued from front page)

recommendations and cost estimates. The contractor will assist in developing a radon application tool for the Family Housing Environmental Health & Safety (EHS) Management Team.

Once completed, the documents will further assist the Navy in complying with OPNAVINST 5090.1b CH-2, Chapter 26, and the Indoor Radon Abatement Act of 1988. Points of contact at NAVFAC are Craig Collins, Family Housing; and Felix Mestey, Environmental. Northern Division is managing the contract and project. The Northern Division point of contact is Dominic DiGiantomasso, (610) 595-0556, ext. 171 or e-mail at http://digiantomasso@efdnorth.navfac.navy.mil.

Riders On The Storm

(Continued from page 5)

ity for sediment/soil versus water. These would include heavier-weight organic compounds such as polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), pesticides, and dioxins/furans. Metals can also be of concern. The assessment of suspended sediment chemical concentrations is an effective way to gauge sediment contaminant loads to ponds, swales, or surface water bodies.

Typical equipment for this method includes a recording weather station and automated stormwater samplers. This equipment is used to correlate the intensity of the storm with first-flush (high initial contaminant concentrations) total suspended solids. Once TSS concentrations are known, then collection tanks and pumps can be sized and pipe and fittings selected for each sampling site.

Manual collections are more common, but automation is an option. Typically automation is limited to sites where long-term monitoring will be needed, stormwater is rather turbid, and fears about tampering or clogging are minimal.

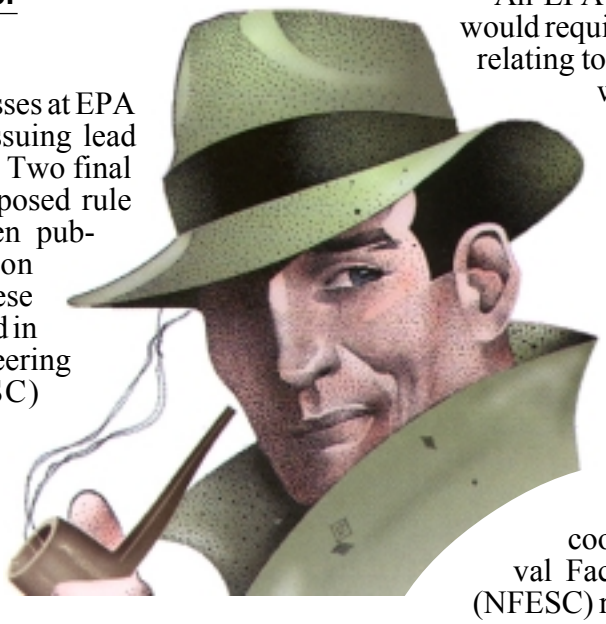
Equipment used after collection includes a portable electrical centrifuge with a stainless steel bowl. Sediment is re-suspended in the tanks, if necessary, using a tank mixer. As the water is piped into the centrifuge, it is subjected to forces in excess of 2,500 gravities. This allows for the removal of sediment particles to 1-2 microns in size. This method allows the concentration of sediment from thousands of gallons of stormwater to one gallon within a stainless steel bowl. If the bowl contains a sufficient quantity, the sediment can be collected into laboratory sample containers in the field, or else the sediment slurry will need to be processed though a smaller scale laboratory centrifuge.

Field centrifuging can pull suspended sediment of > 1-2 microns from thousands of gallons of stormwater.

This method allows a project team to assess if contaminants are associated with suspended sediment or stormwater. If sediment is the issue, then reduction steps such as source reduction, filtering, or deflective separation can be examined as remedial steps.

The Lead Reg Plot Thickens...Again

By Thom Snyder
Industrial Hygienist



The printing presses at EPA have been busy issuing lead regulations again. Two final rules and one proposed rule have recently been published. Discussion and impacts of these rules were included in the Navy Lead Steering Committee (LSC) meeting in Alexandria, VA, during the week of January 22.

On January 5 the long-awaited "Identification of Dangerous Levels of Lead" final rules were published. Lower dust and soil levels and a new "paint lead hazard" definition are the focus of the regulations, which went into effect on March 6. (Note: Add 60-day delay per Presidential order). The important impacts of the new regulation are as follows:

- Nothing in the rule requires property owners to take action or implement controls if one or more hazards are identified.
- There are two situations where these new standards apply: abatement of hazards associated with an elevated blood lead in a child and transfer of residential property (discussion following).

EPA's final rule under the Emergency Planning and Right to Know Act (EPCRA) reduced the reporting requirements for lead. The Toxic Release Inventory (TRI) thresholds for use are classified as manufacturing, processing, or "otherwise." The old manufacturing and processing quantities were 25,000 pounds per year and the otherwise quantity was 10,000 pounds per year. All quantities were reduced to 100 pounds per year. Relative to lead paint, there may be exemptions for existing paint on buildings. For now, it is uncertain how removal and disposal of lead paint factors into the equation.

An EPA proposed rule this past January 22 would require two specific types of notifications relating to lead. An advance notification form would be required prior to abating lead-based paint (LBP). Training providers would be required to notify EPA prior to offering LBP activities training courses and following completion of the course. As indicated above, "abatement" activities are required only to eliminate hazards associated with an elevated blood lead level in a child or when transferring residential property. The Navy is concerned that the training notification requires Social Security Numbers of students. The LSC has coordinated comments through the Naval Facilities Engineering Service Center (NFESC) regulatory desk.

FYI

With all the changes in regulations, there is confusion when applying LBP standards to construction projects in Navy housing. Compliance with OSHA is the primary requirement for work in non-housing and non-child-occupied facilities that disturbs lead. OSHA construction regulations use "any level of lead" in a material to activate the standard (The Navy has unofficially adopted 0.01% as the level.) The contractor is required to provide training, medical surveillance, exposure monitoring, respirators, and protective clothing. NavFac message R 160647Z of April 1998 recommends wipe samples following non-housing construction work and requires a clearance level of 200 micrograms per square foot.

For housing work, contractors are resorting to "lead abatement subcontractors" to handle work that disturbs lead paint. Typical examples are revitalization projects or other maintenance work that disturbs more than two square feet of a painted interior surface. This is not a legal requirement, but it avoids the complications associated with specialized construction. The legal requirements for construction work in housing are to follow OSHA standards (with the exceptions cited above for abatement or transfer). The Navy contract guide

(Continued on next page)

FY-00 DRUM E Awarded to Two-Man Team

Lonnie Monaco (center) and Mike Fohner (right) proud recipients of the CNO sponsored DRUM E award are congratulated by Dave Olsen.

By Al Haring

Director, Environmental Restoration Division

We've broken from tradition in the selection of this year's DRUM E award winner. The CNO-sponsored DRUM E award is given annually to the NorthDiv employee who has made the most significant contribution to the Installation Restoration Program. We've made an exception, and the award goes to the Lonnie Monaco/Mike Fohner team that was instrumental in making NAS Warminster, PA environmentally suitable for transfer.

Working under extremely tight schedules and juggling multiple priorities they managed to meet all critical milestones. Together they completed eight records of decision (RODs), seven findings of suitability to transfer (FOSTs), and three operating properly and successfully (OPS) determinations. They finalized the environmental baseline survey (EBS), and resolved numerous areas of concern along the way. Other nominees for this award who also made significant contributions to the IR program were Todd Bober, Christi Davis and Mark Leipert.

Lead Reg Plot Thickens

(Continued from last page)

specifications for housing work also require clearance wipe sampling. This ensures that a hazardous condition is not left behind where children are expected to reside.

OSHA compliance and additional Navy contract requirements are complicating housing projects. It's an easy path to opt for the specialty abatement contractor, rather than fulfill OSHA requirements and Navy specifications. The bottom line is that the full-dress EPA regulatory compliance isn't required, unless we're abating LBP hazards (associated with lead poisoning) or transferring residential property. However, the need for lead-safe work in housing is critical to protect our Navy families. The LSC is working with NavFac Hq housing to evaluate impacts and improve solutions. Please share this information with your ROICC, facilities, housing and OSH offices.

Did You Know That...

...there exists a common fern that soaks up huge amounts of arsenic without ill effects and could be a boon to bioremediation?

Today's Science & Technology News

A Great Year for Mike

Mike Fohner, apart from being the recipient of the DRUM E award (see article above), received an even better award last Christmas. At 8:15 on the night of December 22 Mike and his wife Kathy became the proud parents of a son, Daniel Joseph who checked in at 7 lbs. 8oz., and joins big brothers Matthew (3yrs.) and David (21 mo.)

Congratulations to Kathy and Mike! What a great Christmas gift!

EQA Replaces ECE, Shifts Focus to EMS and Begins with IAP.

By Terry Gallagher
Environmental Engineer

As many are well aware, the Navy is moving forward with the new Environmental Quality Assessment (EQA) program as promulgated in Chapter 20 of OPNAVINST 5090.1B C2. This new program will improve on the Navy's soon-to-be-retired Environmental Compliance Evaluation (ECE) program and will shift the focus of external assessments from compliance auditing to Environmental Management System (EMS) reviews. Greater reliance will be placed on installation personnel who will conduct their own compliance evaluations. This new approach will also support Executive Order 13148 entitled "Greening the Government Through Leadership in Environmental Management."

Each installation's first step in this process is to develop an Internal Assessment Plan (IAP)-- an inventory of all practices and processes that have the potential to adversely impact the environment. The IAP also documents the frequency of inspections and assigns inspection and compliance responsibilities. All activities within the fenceline (i.e. tenants, contractors, other government agencies) will be included in the host activity's IAP. The IAPs are reviewed during the external assessments where the focus is placed on determining whether EMS's are being successfully implemented to achieve not only compliance but demonstrated progress toward environmental excellence.

Three CINCLANTFLT activities (FISC Craney Island, NWS Charleston, and SUBASE New London) are currently taking part in an EQA pilot study, and lessons learned will allow us to more effectively and fully implement the program Navywide. For further information on the pilot study, sample IAPs or the EQA process in general, please contact Terry Gallagher at (610) 595-0567, ext. 119 .

Nomans Land Island

(Continued from front page)

Defense Explosive Safety Board (DDESB). Old underground storage tanks were likewise removed. A program of sampling and analysis for UXO constituents is in progress to determine the environmental impacts from range operations.

In spite of range activities, the island provided excellent habitat for birds. A portion has been a US Fish and Wildlife Service (USFWS) managed no-fire zone bird sanctuary since 1970. USFWS took possession of the entire island in 1998 as an unstaffed wildlife refuge with the Navy retaining responsibility for completing environmental and UXO remediation. The island and surrounding waters remain restricted from public access. Tribal concerns relate to the proximity of Nomans Land Island to Martha's Vineyard, and the potential impacts that remaining UXO could have on their health, livelihood and cultural ties to the island. Ongoing environmental investigations and a cooperative effort with USFWS will address those concerns. Increased consultation will offer the Wampanoag Tribe opportunities, beyond normal community involvement activities, to play a more active role in the Navy's environmental actions.

During the time period that the Navy has been busy cleaning up and transferring Nomans Land Island, policies for consultation between government agencies and Native American tribes have been expanded. One of the desires expressed during the meeting was that other Native American Tribes benefit from lessons learned at Noman's Land Island. We agree, and recommend that the entire Navy environmental community be aware of the Navy's Native American consultation policies as they plan and manage their work.